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PATENT
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SUBSTITUTE SPECIFICATION

**METHOD OF FORMING A UNITED EXOTHERMIC MEDIUM AND A
HEATING ELEMENT**

[0001] This is a continuation of application Serial No. 09/973,230 filed October 9, 2001, now abandoned, which is a continuation of application Serial No. 09/530,635 filed May 3, 2000, now abandoned, filed as 371 of international application No. PCT/JP99/04784, filed September 3, 1999.

[Field of the Invention]

[0002] The present invention relates to a united flexible exothermic medium and a heating element using it, and more particularly to a united exothermic medium with high flexibility used for a heating element such as a heating sheet for thermotherapy, a disposable body warmer, and the like.

[Description of the Related Art]

[0003] In recent years, a variety of heating elements have been widely used for soothing stiff shoulders, muscular pain and neuralgia. A heating element is usually constructed with an exothermic agent generating heat in contact with air and films having a prescribed air-permeability to seal the agent so that the agent reacts gradually with air and generates heat for a desired period, and is attached to the skin or clothes with, for example, a tacky agent. As an exothermic agent, a powdery mixture of, for example, iron powder, activated carbon, sodium chloride and water has been adopted.

[0004] However, such a heating element using a powdered exothermic agent is disadvantageous in that it is impossible to make and keep its thickness uniform all over the entire element because the powder moves freely inside a bag, and as a result, a uniform thermotherapeutic effect cannot be obtained.

[0005] Furthermore, the conventional heating element is too thick to fit on parts with large curvatures, and its heaviness makes users uncomfortable especially, when used on the face.

[0006] In contrast, a block type exothermic medium is disclosed in Japanese Patent Laid-Open No. 59-189183 (1984), wherein the powder of an exothermic